AMENDMENTS TO THE CLAIMS

1. (**Currently Amended**) ~~Integrated~~ An integrated thermoelectric module ~~(10) formed of~~ comprising:

a set of thermoelectric elements, each of which is made of P type and N type conductor and/or semiconductor elements electrically connected in series and thermally connected in parallel,

wherein said thermoelectric elements are electrically connected in series and/or in parallel and thermally connected in parallel, and are assembled on flexible supports ~~(11)~~ made of a polymeric material, the flexible supports being connected to ~~the~~ respective heat exchangers ~~(12)~~,

~~characterized in that the~~ wherein said thermoelectric elements are distributed in the interior of ~~the~~ said integrated thermoelectric module ~~(10)~~ so as to geometrically harmonize heat transferred from ~~the~~ said integrated thermoelectric module ~~(10)~~ with heat exchanged by the heat exchangers, ~~(12)~~ thus making the temperature distribution on ~~said~~ the heat exchangers ~~(12)~~ as uniform as possible, in order to maximize the efficiency of ~~the~~ said integrated thermoelectric module ~~(10)~~ by reducing ~~the~~ a thermal head between its two opposite faces.

2. (**Currently Amended**) ~~Integrated~~ The integrated thermoelectric module according to claim 1, ~~characterized in that~~ wherein, in order to connect said integrated thermoelectric module ~~(10)~~ to the heat exchangers, ~~(12)~~ a thermally conductive material of phase conversion type ~~(13)~~ is used having high thermal conductivity and which is capable of absorbing, without ~~damages~~ damage to said integrated thermoelectric module, possible irregularities of the thickness of ~~the~~

said integrated thermoelectric module ~~(10)~~ due to height tolerances of ~~the~~ said thermoelectric elements.

3. (**Currently Amended**) ~~Integrated~~ The integrated thermoelectric module according to claim 1, ~~characterized in that in~~ wherein, in order to connect said integrated thermoelectric module ~~(10)~~ to the heat exchangers, ~~(12)~~ a thermally conductive graphite material is used, laid either on one face only or on both faces of ~~the~~ said integrated thermoelectric module ~~(10)~~.

4. (**Currently Amended**) ~~Integrated~~ The integrated thermoelectric module according to claim 1, ~~characterized in that its~~ wherein a base of said integrated thermoelectric module has a rectangular shape ~~, for instance a square shape~~.

5. (**Currently Amended**) ~~Integrated~~ The integrated thermoelectric module according to claim 1, ~~characterized in that its~~ wherein a base of said integrated thermoelectric module has a curvilinear peripheral shape ~~, for instance a circular shape~~.

6. (**Currently Amended**) ~~Integrated~~ The integrated thermoelectric module according to claim 1, ~~characterized in that~~ wherein ~~the~~ said thermoelectric elements are uniformly distributed inside ~~the~~ said integrated thermoelectric module ~~(10)~~.

7. (**Currently Amended**) ~~Integrated~~ The integrated thermoelectric module according to claim 1, ~~characterized in that~~ wherein ~~the~~ said thermoelectric elements are non-uniformly distributed inside ~~the~~ said integrated thermoelectric module ~~(10)~~.

8. (**Currently Amended**) ~~Integrated~~ The integrated thermoelectric module according to claim 1, ~~characterized in that said module is associated with~~ wherein the heat exchangers ~~having~~ have a planar connection surface.

9. (**Currently Amended**) ~~Integrated~~ The integrated thermoelectric module according to claim 1, ~~characterized in that said module is associated with~~ wherein the heat exchangers ~~having~~ have a concave and/or convex connection surface.

10. (**Currently Amended**) ~~Integrated~~ The integrated thermoelectric module according to claim 1, ~~characterized in that said module is associated with~~ wherein the heat exchangers ~~having~~ have a cylindrical shape with a polygonal cross section.

11. (**Currently Amended**) ~~Integrated~~ The integrated thermoelectric module according to claim 1, ~~characterized in that said module is associated with~~ wherein the heat exchangers ~~having~~ have a cylindrical shape with a circular cross section.

12. (**Currently Amended**) ~~Integrated~~ The integrated thermoelectric module according to claim 1, ~~characterized in that~~ wherein the heat exchangers are finned.

13. (**Currently Amended**) ~~Integrated~~ The integrated thermoelectric module according to claim 1, ~~characterized in that~~ wherein the heat exchangers may be touched by gaseous or liquid fluids as well as by fluids that are bound to phase conversion.

14. (**Currently Amended**) ~~Integrated~~ The integrated thermoelectric module according to claim 1, ~~characterized in that~~ wherein the heat exchangers may be touched by fluids bound to phase conversion.

15. (**Currently Amended**) ~~Integrated~~ The integrated thermoelectric module according to claim 1, ~~characterized in that~~ wherein the heat exchangers avail themselves of the latent heat of phase conversion of a fluid.

16. (**New**) The integrated thermoelectric module according to claim 4, wherein the rectangular shape comprises a square shape.

17. (**New**) The integrated thermoelectric module according to claim 5, wherein the curvilinear peripheral shape comprises a circular shape.